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EXAMINER	
LANDAU, MATTHEW C	
ART UNIT	PAPER NUMBER
2815	

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/782,788	VETROVEC, JAN	
	Examiner	Art Unit	
	Matthew Landau	2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) *9,10,13,22,23,33 and 34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,11,12,14-21 and 25-32* is/are rejected.

7)☒ Claim(s) *8 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *24 January 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on January 24, 2003 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Objections

2. Claim 19 objected to because of the following informalities:

The limitation "said at least one" should be replaced with "said at least one source of optical pump radiation".

Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-7, 11, 12, 14-21, and 25-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of copending Application No. 09/767,202 in view of Smiley. Specifically, claims 1 and 11 are provisionally rejected over claims 1, 2, 3, and 8 of the copending application, claim 14 is provisionally rejected over claim 18 of the copending application, and claim 26 is provisionally rejected over claim 20 of the copending application. The difference between the claims of the instant application and the claims of the copending application is having a plurality of discrete laser gain medium elements. Figure 3 of Smiley discloses a substrate 17 with a thin film of laser material 18 divided into a plurality of discrete sections. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the copending application to include a plurality of laser gain medium elements for the purpose of reducing the possibility of oscillation buildup (column 3, lines 67-70 of Smiley). This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-6 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Smiley, Ullman et al. (US Pat. 5,903,583, hereinafter Ullman), and Brauch et al. (US Pat. 5,553,088, hereinafter Brauch).

In regards to claim 1, Figure 1 of the instant application discloses a solid-state laser module for amplification of laser radiation comprising: a substrate having a front surface and a back surface, said front surface of said substrate having a plurality of channels formed therein; a laser gain element having a front surface, a back surface, and a peripheral edge surface, said back surface of said laser gain medium being in contact with said front surface of said substrate; a source of optical pump radiation (Diode Array) for directing optical pump radiation into said laser gain medium element; wherein the substrate is cooled. A difference between the admitted prior art and the claimed invention is having a plurality of laser gain medium elements. Figure 3 of Smiley discloses a substrate 17 with a thin film of laser material 18 divided into a plurality of discrete sections. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the admitted prior art by including a plurality of discrete laser gain medium elements. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of reducing the possibility of oscillation buildup (column 3, lines 67-70). It is further obvious in the invention of the admitted prior art and Smiley to have the plurality of laser gain elements placed closely adjacent one another (Figure 3) for the purpose of minimizing the space occupied by the gain elements. A further difference between the claimed invention and the admitted prior art is the channels are maintained at a pressure lower than the pressure exerted on the front surface of the gain elements (i.e., ambient pressure). Ullman discloses a substrate with a plurality of channels, wherein the

channels are maintained at a reduced pressure compared to the ambient pressure (column 9, lines 30-37). In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the admitted prior art by maintaining the channels at a pressure lower than the pressure exerted on the front surface of the gain elements. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of preventing a cooling medium from emerging from the system (column 9, lines 35-37). A further difference between the claimed invention and the admitted prior art is at least one of the laser gain elements has an optical coating on the back surface thereof to provide high reflectivity at a lasing wavelength and an optical coating on the front surface thereof being antireflective at a lasing wavelength. Figure 2 of Brauch discloses a laser gain element 12 with a reflective coating 16 on the back surface thereof and an antireflective coating 36 on the front surface thereof. In view of such teaching, it would have been obvious to the ordinary artisan to further modify the admitted prior art by including antireflective and reflective coatings on the front and back surfaces, respectively, of the laser gain elements. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of enhancing the amplification of the laser gain medium.

In regards to claim 2, Figure 1 of the instant application discloses the channels comprise a microchannel heat exchanger. It is inherent for the microchannel heat exchanger to have a cooling medium flowing through the channels.

In regards to claims 3 and 4, it is further obvious in the invention of the admitted prior art, Smiley, Ullman, and Brauch to use the Yb:YAG gain medium of Brauch (column 20, lines

33-35 and Table 1) for the purpose of using a material that provides for a relatively large effective absorption length.

In regards to claim 5, Figure 1 of the instant application discloses the source of optical pump radiation is comprised of at least one semiconductor diode laser.

In regards to claim 6, Figure 1 of the instant application discloses a material suitable for absorption of the amplified spontaneous emission (ASE) is affixed to at least one part of a peripheral edge of at least one of said laser gain medium elements.

In regards to claim 14, Figure 1 of the instant application discloses a rigid substrate having a plurality of internal passages forming channels within a support surface of said rigid substrate, said passages leading up to the surface of said substrate and a laser gain element disposed against a support surface. It is clearly ascertained from Figure 1 of the instant application that the laser gain medium has a pair of surfaces having a first dimension, said pair of surfaces further being opposite to each other and being separated by a peripheral edge surface, the laser gain medium having a thickness representing a second dimension which is substantially smaller than said first dimension. Figure 1 of the instant application also discloses at least one source of optical pump radiation directing optical pump radiation into the laser gain medium element. A difference between the claimed invention and the admitted prior art is having a plurality of laser gain medium elements disposed closely adjacent one another. Figure 3 of Smiley discloses a substrate 17 with a thin film of laser material 18 divided into a plurality of discrete sections, wherein the sections are disposed closely adjacent one another. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the admitted prior art by including a plurality of discrete laser gain medium

elements disposed closely adjacent one another. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of reducing the possibility of oscillation buildup (column 3, lines 67-70). A further difference between the claimed invention and the admitted prior art is the channels are maintained at a substantially lower pressure than an atmosphere in which said laser module is immersed. Ullman discloses a substrate with a plurality of channels, wherein the channels are maintained at a reduced pressure (column 9, lines 30-37). In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the admitted prior art by maintaining the channels at a reduced pressure. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of preventing a cooling medium from emerging from the system (column 9, lines 35-37). A further difference between the claimed invention and the admitted prior art is a first one of said pair of surfaces including an anti-reflection coating and a second surface of said pair of surfaces including a coating which is substantially totally reflective. Figure 2 of Brauch discloses a laser gain element 12 with a reflective coating 16 on the back surface thereof and an antireflective coating 36 on the front surface thereof. In view of such teaching, it would have been obvious to the ordinary artisan to further modify the admitted prior art by including antireflective and reflective coatings on the front and back surfaces, respectively, of the laser gain elements. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of enhancing the amplification of the laser gain medium.

In regards to claim 15, Figure 1 of the instant application discloses the laser gain medium is conformed to the shape of said support surface.

In regards to claim 16, Figure 1 of the instant application discloses a cooled substrate.

In regards to claim 17, Figure 1 of the instant application discloses the channels comprise a microchannel heat exchanger. It is inherent for the microchannel heat exchanger to have a cooling medium flowing through the channels.

In regards to claim 18, Figure 1 of the instant application discloses a material suitable for absorption of the amplified spontaneous emission (ASE) is affixed to at least one part of a peripheral edge of at least one of said laser gain medium elements.

In regards to claim 19, a further difference between the admitted prior art and the claimed invention is the sources are arranged for directing optical pump radiation into at least one said peripheral edge of at least one of said laser gain medium. Figure 12 of Brauch discloses a plurality of sources of optical pump radiation 34 arranged to direct pump radiation into a peripheral edge of a laser gain element 12. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of the admitted prior art in the manner described above by directing optical pump radiation into the peripheral edge of the laser gain medium element. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of increasing the effective absorption length of the laser gain medium.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Smiley, Ullman, and Brauch as applied to claim 6 above, and further in view of Powell et al. (US Pat. 4,849,036, hereinafter Powell).

In regards to claim 7, a further difference between the admitted prior art and the claimed invention is the material suitable for absorption of amplified spontaneous emission is affixed to said edge by means chosen from the group consisting of adhesive bonding, diffusion bonding, fusion bonding, and optical contacting followed by heat treatment. Figure 7A of Powell discloses an ASE absorption material 12 attached to a laser glass 11 by way of an adhesive bond 13. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of the admitted prior art by attaching the ASE absorption material by way of an adhesive bond. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of providing a bond that is strong enough to resist the repeated thermal stresses due to ASE absorption (column 7, lines 60-65).

8. Claims 11 are 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior in view of Smiley, Ullman, and Brauch as applied to claim 1, above, and further in view of Meissner et al. (US Pat. 5,936,984, hereinafter Meissner).

In regards to claim 11, a further difference between the claimed invention and the admitted prior art is including an undoped optical medium attached to said peripheral edge of said laser gain media elements; wherein said optical pump radiation is directed into said undoped optical medium, said undoped optical medium transporting said optical pump radiation into an associated one of said laser gain media elements; and wherein said undoped optical medium is secured to said peripheral edge via a bond which is transparent at a wavelength of said pump radiation and a lasing wavelength of said laser gain media. Figure 8 of Meissner discloses an

end cap (undoped optical medium) 301 attached to a peripheral edge of a laser gain medium 101. Figure 8 of Meissner also discloses said optical pump radiation from laser diode 109 is directed into said end cap 301, said end cap 301 transporting said optical pump radiation into the laser gain medium 101. Meissner also discloses the end cap 301 is secured to the peripheral edge via an optical bond 305 (column 7, lines 66 and 67, and column 8, lines 1-18). In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of the admitted prior art to include an undoped optical medium secured to a peripheral edge of the laser gain medium element. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of improving the coupling between the pump source and laser medium (column 3, lines 17-19).

In regards to claim 12, a further difference between the admitted prior art and the claimed invention is at least one tapered duct interposed between said undoped optical medium and the source of optical pump radiation. Figure 8 of Meissner discloses a tapered duct 111 disposed between the source of optical pump radiation 109 and the undoped optical medium 301. In view of such teaching it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of the admitted prior art by including a tapered duct between the pump source and the undoped optical medium. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of concentrating the pump radiation in order to end pump the laser gain medium element (column 4, lines 22-25).

9. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior in view of Smiley, Ullman, and Brauch as applied to claim 14 above, and further in view of Meissner.

In regards to claim 20, a further difference between the admitted prior art and the claimed invention is at least one tapered duct interposed between the source of optical radiation and said peripheral edge of the laser gain element. Figure 8 of Meissner discloses a tapered duct 111 disposed between the source of optical pump radiation 109 and the edge of the laser gain element 101. In view of such teaching it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of the admitted prior art by including a tapered duct between the pump source and the peripheral edge. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of concentrating the pump radiation in order to end pump the laser gain medium element (column 4, lines 22-25).

In regards to claim 21, a further difference between the claimed invention and the admitted prior art is including an undoped optical medium attached to said peripheral edge of said laser gain media elements via an optically transparent bond, said undoped optical medium conveying said optical pump radiation into said peripheral edge. Figure 8 of Meissner discloses an end cap (undoped optical medium) 301 attached to a peripheral edge of a laser gain medium 101. Figure 8 of Meissner also discloses said optical pump radiation from laser diode 109 is directed into said end cap 301, said end cap 301 transporting said optical pump radiation into the laser gain medium 101. Meissner also discloses the end cap 301 is secured to the peripheral edge via an optical bond 305 (column 7, lines 66 and 67, and column 8, lines 1-18). In view of such

teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of the admitted prior art to include an undoped optical medium secured to a peripheral edge of the laser gain medium element. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of improving the coupling between the pump source and laser medium (column 3, lines 17-19).

10. Claims 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior in view of Smiley, Ullman, and Brauch as applied to claim 1, above, and further in view of Basu.

A further difference between the admitted prior art and the claimed invention is at least one lensing element disposed between at least one of said sources of optical pump radiation and said peripheral edge. Figure 1 of Basu discloses a lensing element 28 disposed between a source of optical pump radiation 24 and a peripheral edge 14 of a laser gain element 12. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of the admitted prior art by including a lensing element disposed between the optical pump and the laser gain element. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of focusing the output of the pump radiation source upon the end of the laser medium (column 3, lines 11-16).

11. Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Smiley and Brauch.

In regards to claim 26, Figure 1 of the instant application discloses a solid-state laser module comprising: a cooled rigid substrate, a laser gain medium, and a source of optical pump radiation directing optical pump radiation into the laser gain medium. It is clearly ascertained from Figure 1 of the instant application that the laser gain medium has a pair of surfaces having a first dimension, said pair of surfaces further being opposite to each other and being separated by a peripheral edge surface, the laser gain medium having a thickness representing a second dimension which is substantially smaller than said first dimension. A difference between the claimed invention and the admitted prior art is having a plurality of laser gain medium elements disposed closely adjacent one another. Figure 3 of Smiley discloses a substrate 17 with a thin film of laser material 18 divided into a plurality of discrete sections, wherein the sections are disposed closely adjacent one another. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the admitted prior art by including a plurality of discrete laser gain medium elements disposed closely adjacent one another. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of reducing the possibility of oscillation buildup (column 3, lines 67-70). A further difference between the claimed invention and the admitted prior art is a first one of said pair of surfaces including an anti-reflection coating and a second surface of said pair of surfaces including a coating which is substantially totally reflective, and said second one of said pair of surfaces being attached to said support surface of said substrate and maintained so by a bonded joint. Figure 2 of Brauch discloses a laser gain element 12 with a

reflective coating 16 on the back surface thereof, an antireflective coating 36 on the front surface thereof, with said second one of said pair of surfaces being attached to a substrate 18 and maintained so by a bonded joint (column 9, lines 61-67). In view of such teaching, it would have been obvious to the ordinary artisan to further modify the admitted prior art by including antireflective and reflective coatings on the front and back surfaces, respectively, of the laser gain elements, with the surfaces attached to the substrate by a bonded joint. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of enhancing the amplification of the laser gain medium and securing the gain elements to the substrate.

In regards to claim 27, the product by process limitation "wherein said bonded joint is produced by optical contacting followed by heat treatment" does not structurally distinguish the claimed invention over the prior art.

In regards to claim 28, the product by process limitation "wherein said bonded joint is produced by a method selected from a group comprising soldering, brazing, and adhesive bonding" does not structurally distinguish the claimed invention over the prior art.

In regards to claim 29, Figure 1 of the instant application discloses channels formed within a support surface of the substrate forming a microchannel heat exchanger. It is inherent for the microchannel heat exchanger to have a cooling medium flowing through the channels.

In regards to claim 30, Figure 1 of the instant application discloses a material suitable for absorption of the amplified spontaneous emission (ASE) is affixed to at least one part of a peripheral edge of at least one of said laser gain medium elements.

In regards to claim 31, a further difference between the admitted prior art and the claimed invention is the sources are arranged for directing optical pump radiation into at least one said peripheral edge of at least one of said laser gain medium. Figure 12 of Brauch discloses a plurality of sources of optical pump radiation 34 arranged to direct pump radiation into a peripheral edge of a laser gain element 12. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to further modify the invention of the admitted prior art in the manner described above by directing optical pump radiation into the peripheral edge of the laser gain medium element. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of increasing the effective absorption length of the laser gain medium.

12. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Brauch as applied to claim 31 above, and further in view of Meissner.

A further difference between the claimed invention and the admitted prior art is including an undoped optical medium attached to said peripheral edge of said laser gain media elements via an optically transparent bond, said undoped optical medium conveying said optical pump radiation into said peripheral edge. Figure 8 of Meissner discloses an end cap (undoped optical medium) 301 attached to a peripheral edge of a laser gain medium 101. Figure 8 of Meissner also discloses said optical pump radiation from laser diode 109 is directed into said end cap 301, said end cap 301 transporting said optical pump radiation into the laser gain medium 101. Meissner also discloses the end cap 301 is secured to the peripheral edge via an optical bond 305 (column 7, lines 66 and 67, and column 8, lines 1-18). In view of such teaching, it would have

been obvious to the ordinary artisan at the time the invention was made to modify the invention of the admitted prior art to include an undoped optical medium secured to a peripheral edge of the laser gain medium element. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of improving the coupling between the pump source and laser medium (column 3, lines 17-19).

Allowable Subject Matter

13. Claims 8 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's arguments filed July 15, 2003 have been fully considered but they are not persuasive.

In response to Applicant's argument regarding claim 1 that "Smiley does not appear to use a plurality of discrete elements, but rather a single element etched into divisions", Smiley discloses the film 18 is "scribed to divide it into an appropriate number of cells, compartments, or sections..." (column 3, lines 70-72). Since scribing a film formed each of these sections, they are in fact separate entities and it can be considered that the separate sections are "discrete". In response to Applicant's argument that "Smiley makes no mention of having individual laser gain medium elements, each in contact with the substrate as claimed", Figure 3 of Smiley clearly discloses these features as indicated in the above rejection. In response to Applicant's arguments

that the ordinary artisan would not be motivated to modify Smiley, it is noted that the rejection set forth modifies the admitted prior art, not Smiley.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (703) 305-4396.

The examiner can normally be reached from 8:00 AM-4: 30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Matthew C. Landau

Examiner

August 9, 2003

SHEILA V. CLARK
PRIMARY EXAMINER